

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for controlling an optical power level, comprising the steps of:

a) increasing a control value of a driving signal generator for driving a pickup unit to output an optical power until the driving signal generator starts to generate a driving voltage; and

~~b) checking whether a driving voltage is generated by the driving signal generator based on the increased control value; and~~

eb) setting the increased control value at which the driving signal generator starts to generate the driving voltage as an offset value for setting up a desired optical power of the pickup unit.

2. (Previously Presented) The method as set forth in claim 1, wherein the driving voltage of the driving signal generator is applied to a laser diode of the pickup unit, and a magnitude of the optical power is determined by a level of the driving voltage.

3. (Original) The method as set forth in claim 1, wherein the offset value is stored in a nonvolatile memory.

4. (Previously Presented) The method as set forth in claim 1, wherein the offset value is determined when an optical disc apparatus is initially driven.

5. (Currently Amended) The method as set forth in claim 1, wherein the step (eb) includes the steps of:

e1b1) determining the control value at which the driving voltage of the driving signal generator reaches a predetermined voltage level; and

e2b2) subtracting a predetermined value from the determined control value, and setting the subtracted result value as the offset value.

6. (Previously Presented) The method as set forth in claim 5, wherein the predetermined voltage level is within a threshold area of the driving voltage of the driving signal generator.

7. (Currently Amended) The method as set forth in claim 1, further comprising the step of:

dc) calculating a control value for generating the desired optical power of the pickup unit based on the offset value.

8. (Currently Amended) The method as set forth in claim 7, wherein the step (dc) includes the steps of:

d1c1) applying a predetermined control value and measuring a corresponding optical power of the pickup unit; and

d2c2) calculating the control value for generating the desired optical power based on the predetermined control value, the measured optical power corresponding to the predetermined control value, and the offset value.

9. (Currently Amended) The method as set forth in claim 8, wherein the control value for generating the desired optical power in the step (~~d2c2~~) is calculated by the following equation:

$$DAC_{DSL} = DAC_{offset} + \frac{DSL}{DSL_1} \times (DAC_1 - DAC_{offset}),$$

where DSL is the desired optical power, DAC_{DSL} is the control value for generating the desired optical power, DAC_{offset} is the offset value, DAC_1 is the predetermined control value, and DSL_1 is the measured optical power corresponding to DAC_1 .

10. (Previously Presented) The method as set forth in claim 7, wherein the control value for generating the desired optical power is previously stored in a nonvolatile memory in the form of a difference between the control value and an offset value for setting up the desired optical power.

11. (Currently Amended) The method as set forth in claim 10, wherein the step (~~dc~~) comprises the step of:

~~d3c3~~) calculating the control value for generating the desired optical power based on the offset value determined at step (~~eb~~) and the difference stored in the nonvolatile memory.

12. (Previously Presented) The method as set forth in claim 10, wherein the desired optical power is used for either one of a data recording mode, a data playback mode, and a disc discrimination mode.

13. (Previously Presented) A method for controlling an optical power level, comprising the steps of:

a) regularly increasing a control value of a driving signal generator for driving a pickup unit adapted to output an optical power;

b) checking a driving signal of the driving signal generator according to the increasing control value; and

c) setting a control value at which the driving signal begins to be generated as an offset value for setting up an optical power; and

d) calculating a control value for generating a driving signal of the pickup unit on the basis of the offset value, wherein a control value for generating a predetermined driving signal level is previously stored in a nonvolatile memory in the form.